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Conservation Systems Research

Evaluation of Planting Dates and Termination Dates for Winter Cover Crops

RESEARCH PROJECT DESCRIPTION NO. 36

Multiple planting date experiment - rye.

Researchers

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The Challenge

Historically, cover crop planting has occurred throughout the fall at the discretion of the growers schedule and, weather permitting, after summer crop harvest. If growers plant winter covers early, they are at risk of frost-kill. Planting covers late can lead to little cover in the cooler and wetter winter months. Cover crops are usually killed with herbicides at least two weeks before planting, subject to the grower's schedule and weather. Other studies have shown that planting date and termination date influence quality and quantity of residue

production, as well as soil moisture available to the summer cash crop in the spring. The challenge is to develop a model that recommends dates for planting and terminating cover crops to maximize ground cover and soil moisture.

"The challenge is to develop a model that recommends dates for planting and terminating cover crops to maximize ground cover and soil moisture."

The Experiment

At the Alabama Agricultural Experiment Station's E.V. Smith Research Center near Milstead, rye and clover have been established no-till as winter cover at various planting dates throughout the fall. Each cover will then be terminated at various dates prior to planting cotton and corn following rye and clover, respectively. Evaluations will include cover crop residue present throughout the winter and at planting, soil moisture, weed response, and cotton response reflected in biomass and yield.

Multiple planting date experiment – clover.